California Interagency Working Group on Indoor Air Quality

Meeting Minutes

December 13, 2000

Department of Health Services Laboratory Facility
2151 Berkeley Way, Berkeley

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California Department of Health Service / Occupational Health Branch
California Department of Industrial Relations (Cal/OSHA)
Lawrence Berkeley National Laboratory / Indoor Environments Program
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Indoor Air Quality: Asthma and Allergen Control, January 22-23, 2001 at the Elihu Harris State Office Building in Oakland. Sponsored by U.S. EPA and DHS. This training will be invaluable for a wide variety of stakeholders in public health, housing, schools, asthma coalitions, as well as the usual professions directly involved in IAQ. Sandra McNeel of DHS EHIB and Michael Lipsett of OEHHA will speak on health. Richard Shaughnessy, Philip Morey and Eugene Cole will present on IAQ basics, cleaning for health, allergen remediation, and air cleaning. Refer to http://www.utulsa.edu/iaqprogram(click on "Class Schedule). Contact: Barbara Spark, (415) 744-1132, spark.Barbara@epa.gov.

Upcoming Workshops on IAQ Tools for Schools will be held in the SF Bay area (February 21st) and Orange County (February 23rd). Contact Shelly Rosenblum (415) 744-1047, rosenblum.shelly@epa.gov.

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SPECIAL PRESENTATION

Research on Health Effects in Indoor Work Environments: From NIOSH to LBNL, *Dr. Mark Mendel, Epidemiologist,* ***National Institute for Occupational Safety and Health, Currently Guest Scientist at Lawrence Berkeley National Laboratory.*** See http://www.cal-iaq.org/CIWG/ Mendell.htm.

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AGENCY REPORTS ON CURRENT IAQ ACTIVITIES

California Air Resources Board / Indoor Air Quality & Personal Exposure Assessment Program http://www.arb.ca.gov/research/indoor/indoor.htm

-- Peggy Jenkins (*mjenkins@arb.ca.gov*)

Personnel changes. We are pleased to announce that Eric Kwok has joined the Indoor Exposure Assessment Section at ARB. Eric was previously with the Stationary Source Division. He holds a Ph.D. in Environmental Toxicology from UC Riverside. On a sadder note, Steve Hui, a member of the Research Division for 20 years, announced that he is leaving Research Division to join the Chairman's Office of Community Health. Steve will be missed by his close friends and colleagues, but we wish him well as he tackles new challenges. The Indoor Exposure Assessment Section now has two vacancies, and applications are currently being accepted.

Portable Classroom Study. The ARB's Research Screening Committee and Board recently approved funding for Research Triangle Institute to conduct the field portion of this joint ARB-DHS

study. The objective of the project is to obtain survey and field measurement data to assess the environmental health conditions in California's portable classrooms and, to a lesser degree, in traditional classrooms. A tight schedule has been set by the Legislature that requires fieldwork to begin no later than July 2001, and delivery of a final report by June 30, 2002. The investigators will measure formaldehyde; at least eight non-carbonyl VOCs; HVAC function, maintenance, and use; biological agents; carbon monoxide; temperature and humidity; and real-time particle counts. Public workshops are being planned for February 2001. Updates will be posted at http://arbis.arb.ca.gov/research/indoor/pcs/pcs.htm.

Indoor and Personal Particulate Matter Concentrations. The Research Screening Committee and Board also recently approved funding to study indoor-outdoor particulate matter (PM) relationships in the homes of healthy subjects in the inland Los Angeles area. The contractor will be the Harvard School of Public Health. The study will provide needed information to determine the impact of indoor and outdoor PM sources on total personal exposure. Sixteen healthy subjects will by monitored for nine days each. The study will be co-funded by U.S. EPA, and will complement a larger study funded by the U.S. EPA, ARB, and others, which measured PM exposure in healthy and sensitive population groups in Los Angeles, Boston, and Atlanta.

SB25: Children's Environmental Health Protection Act. On December 7, 2000, the Board approved a joint ARB-OEHHA report that briefly reviewed the health-based California Ambient Air Quality Standards (AAQS). The report reviewed the current standards to determine whether they adequately protect the health of the public, including infants and children, with an adequate margin of safety. The report recommends that the standards for PM10, ozone and nitrogen dioxide be fully reviewed, in that order. A second tier of standards will subsequently be reviewed in full as well.

SB 25 also requires that ARB conduct additional monitoring in at least six communities throughout the State to determine whether current monitoring systems adequately measure the public's exposures to pollutants, particularly those of infants and children. The selected communities include Barrio Logan (San Diego), Boyle Heights (Los Angeles), Crockett (Contra Costa County), Fresno, Fruitvale (Oakland), and Wilmington (Los Angeles). Indoor and personal monitoring will be conducted in some of these communities to meet the requirements of the Act. However, it has not yet been decided which sites will include indoor and personal monitoring. Information about the Children's Environmental Health Protection Program is posted on the web at http://www.arb.ca.gov/ch/ceh/ceh.htm.

Children's Bus Study. Staff is reviewing a proposal developed jointly by CE-CERT (UC Riverside) and UCLA to monitor children's exposures to toxics and particulate matter associated with riding in school buses. Children's exposures will by monitored while waiting at bus stops and school loading zones, and while riding on the bus. Real-time measurements will be emphasized to help identify particularly high exposure locations and activities.

Indoor Monitoring in the new CalEPA Building. The Research Division moved into the Cal EPA building on October 1, 2000. As of mid-December, the move is complete, and Sacramento Cal-EPA staff have all moved into the building. ARB staff has been conducting indoor monitoring on several floors prior to occupancy. Section staff will interpret the test results in consultation with OEHHA and advise property management and Cal/EPA on proper ventilation and other procedures, based on indoor air concentrations. Aldehyde levels on some floors have been found to be near the high end of concentrations found in US EPA's BASE study (25-31 ppb formaldehyde), but overall, the pre-move-in levels have been lower than one would expect in a new building, and well below levels at which acute effects would be expected. For more information, CalEPA employees can check the EPAnet.

International Society of Exposure Analysis (ISEA) Conference. The ARB helped co-sponsor the annual ISEA Conference in October in Monterey, and ARB staff contributed to the technical program. Tom Phillips co-chaired a session on residential exposures with an emphasis on cooking and woodburning sources, which under certain conditions lead to unhealthful exposures. Tom also presented the results of the recently-completed ARB-funded Arcadis study that characterized exposures from all types of cooking, and found very high concentrations of particles, formaldehyde, and other pollutants during some common cooking scenarios. Peggy Jenkins chaired a session on motor vehicle-related exposures, covering the latest work in quantifying in-vehicle and near-vehicle concentrations and exposures, as well as GIS-related attempts to relate vehicle and traffic density to health effects. Scott Fruin presented analyses he has conducted characterizing particle and black carbon concentrations inside vehicles, using data collected during ARB's in-vehicle study, and some of the implications for refining exposure assessments for diesel exhaust PM. His analyses showed that concentrations were very high when following diesel-powered vehicles, especially diesel vehicles emitting exhaust at street level compared to those emitting exhaust above the vehicle.

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California Department of Health Service / Environmental Health Investigations Branch -- Sandra McNeel (SMcNeel@dhs.ca.gov) http://www.dhs.ca.gov/ps/deodc/ehib/

Investigations: Staff assisted members of the DHS Occupational Health Branch in an investigation of indoor air quality at Shasta Community Health Center, Redding. Staff reviewed medical records, administered a questionnaire and took environmental samples. The center was closed on Dec. 5 by the county health department following reports of increasing numbers of staff with rashes and breathing difficulty. A private environmental consultant surveyed the building and found some increased levels of glass fiber residue in settled dust (possibly associated with recent remodeling). Concerns were also raised about recent burning of agricultural waste that may have included poison oak. Wipe samples were taken for poison oak toxins; these have been submitted to DHS Environmental Health Laboratory. (Contact Emily Wersinger ewersing@dhs.ca.gov, 510-622-4467)

Staff are conducting a telephone survey of local environmental health departments and building

agencies to determine the types of services available to residents with indoor mold questions or contamination. The survey is collecting information on health and remediation information provided and inspection services available. Estimates of annual mold-related calls, availability of local resources and training needs are also being examined (Contact Sandy McNeel smcneel@dhs.ca.gov 510-622-4457).

Presentations: Staff presented 2 seminars at the California Environmental Health Association meeting in Santa Rosa, Oct 27. Topics discussed were "Molds in Schools" and "Update on Indoor Mycotoxins".

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California Department of Health Service / Indoor Air Quality Section

-- Jed Waldman (JWaldman@dhs.ca.gov) http://www.cal-iaq.org

Allergen Exposure Studies. Janet Macher and Lisa Pheatt (UC Berkeley student) started pilot testing for Lisa's senior project, *Endotoxin in Air and Dust, Particle Size Distribution of Airborne Endotoxin*. Janet Macher continues collaborations with researcher on two important studies on children's exposure: the NIEHS-funded *Community Partnership for Evaluating and Preventing Pesticide Exposures to Young Children* (Salinas): and the CARB-funded *Responses to Short-term Fluctuations in Particulate Air Pollution in Asthmatic Children: Implications for Asthma Natural History, Part B: Characterization of Asthmatic Children's Air Pollution Exposure* (Fresno). Janet is also collaborating with LBNL in their Fresno/Clovis house PM study; recent efforts include: (1) placing 7-day Burkards indoors and outdoors; (2) recording air velocity at inlet of outdoor Burkard to determine effect on anisokinetic sampling on pollen/spore collection; (3) comparing daily counts at house and central site; (4) placing passive samplers beside Burkards to see if pollen/spores can be identified in 1 week of collection Contact: Janet Macher, Jmacher@dhs.ca.gov.

BASE Study. The IAQ staff is continuing the review of data sets from the U.S. EPA Building Assessment & Survey Evaluation (BASE) study of 100 buildings. Key efforts will be looking at the vast and complex data on bioaerosol measurements. Preliminary work was included in the ISEA 2000 presentation (see below). Contact: Kai-Shen Liu, KLiu@dhs.ca.gov.

Environmental Tobacco Smoke (ETS) Study. Staff prepared equipment and protocols for study of ETS leakage from designated smoking rooms as a function of ventilation and room design parameters (at the LBNL chamber). Methods are being developed for the detection of particle-phase tracers of ETS using HPLC. A number of experiments have been conducted at the environmental chamber using a tracer gas (SF_6). Experiments are now being conducted with ETS and the chemical sampling and analysis techniques are being finalized. Lauren Lucas, a new Research Associate has been hired to assist us with analysis of the CTS data. We received the 1999 California Tobacco Survey (CTS) database from UCSD and will evaluate the nonsmokers' ETS exposure in the workplace. We are in process of obtaining an existing database of smoking ordinances in California, and we plan on verifying this information with all the local jurisdictions.

Contact: Leon Alevantis, Lalevant@dhs.ca.gov.

Lead in Homes. Coordinating with the Childhood Lead Poisoning Prevention Branch, field data of different vacuum cleaners and wipe methods on lead removal were evaluated. Currently, pilot field data are being analyzed for the final report to the project sponsor (CDC). Contact: Kai-Shen Liu, KLiu@dhs.ca.gov.

Passive PM monitor. Jeff Wagner is continuing development of an automatic SEM analysis for counting and sizing particles collected with his passive sampler. He tested the passive sampler alongside 4 size-selective aerosol samplers in 3 residences over periods of 24 h - 2 weeks. Contact Jeff Wagner, jwagner@email.unc.edu.

Portable Classroom Study. DHS staff has been working with ARB staff as the contractor is being hired to conduct field work. In November, we sent out a survey to all school districts to enumerate the total numbers of classrooms and portable classrooms for each school site. As of late December, forms were received from approximately 60% of the districts (representing ~80% of schools) study design and Further information given in the ARB Section. Contact: Jed Waldman, Jwaldman@dhs.ca.gov.

Sierra Radon Survey. The second batch of radon monitors were sent to 30 Sierra schools for deployment from Sep. 2000 to May, 2001 in an attempt to characterize annual radon exposure for children. (The first school study only covered 3 months period in spring, but the results showed that 9 schools out of 30 had radon levels above 2 pCi/l). The yearlong radon monitoring in 1000 Sierra households will come to an end soon. Retrieval packages will be sent to those households next January to collect radon monitors for lab analysis. Contact: Feng Tsai, FTsai@dhs.ca.gov.

Conference Presentations.

- *International Society of Exposure Analysis* (ISEA 2000), Monterey Peninsula, CA, Oct. 2000:
    - BASE study: Health effects and Comfort, Kai-Shen Liu
    - Prevalence of airborne fungal species in the BASE study – Janet Macher
    - A GIS approach to assessing radon potential at local level - Kai-Shen Liu and Joey Zhou
- *American Association for Aerosol Research* (AAAR), St. Louis, MO, Nov. 2000:
    - Comparison of 24-Hour and 2-Week PM Samples Using Passive and Conventional Samplers – Janet Macher and Jeff Wagner
    - Bioaerosols and Public Health (tutorial) – Janet Macher
- *Tobacco-Related Disease Research Program – Annual Investigators Meeting* (TRDRP-AIM), San Diego, Dec. 2000:
    - Evaluation of Office ETS Exposure in Relation to AB 13 – Leon Alevantis

Recent Publications.

- Liu KS, Alevantis LE, and Offerman FJ, 2001. A Survey of Environmental Tobacco Controls in

California Office Buildings. *Indoor Air* (in press).

- Liu KS, Paz K, Flessel CP, Waldman JM, and Girman J, 2001. Unintentional Carbon Monoxide Deaths from Residential and Other Nonvehicular Sources. *Archives of Environmental Health* (in press).
- Macher JM, 2001. Optimization of a procedure to isolate culturable microorganisms from carpet dust. *Indoor Air* (in press).
- Macher JM, 2001. Review of methods to isolate culturable microorganisms from settled dust. *Indoor Air* (in press).
- Tsai FC, Daisey JM and Apte MG, 2000. An Exploratory Analysis of the Relationship between Mortality and the Chemical Composition of Airborne Particulate Matter. *Inhalation Toxicology* 12 (Supplement 2): 121-135.
- Tsai FC, Smith KR, Vichit-Vadakan N, Ostro BD, Chestnut LG and Kungskulniti N, 2000. Indoor/Outdoor PM_{10} and $PM_{2.5}$ in Bangkok, Thailand. *J. Exposure Analysis and Environmental Epidemiology* 10: 15-26.
- Wagner J and Leith D, 2001. Field testing of a passive aerosol sampler. *J. Aerosol Sci.* 32:33-48.
- Wagner J and Leith D, 2001. Passive Aerosol Sampler. I: Principle of Operation. *Aerosol Sci. Technol* (in press).
- Wagner J and Leith D, 2001. Passive Aerosol Sampler. II: Wind Tunnel Experiments. *Aerosol Sci. Technol* (in press).
- Waldman JM, 2000. How Can We Improve Air Quality In Commercial Buildings? Changes are needed in practice and policy (invited commentary). The Environmental Forum 17 (4): 50-59.

National Committee Work.

- Kai-Shen Liu attended the U.S. EPA's Science Advisory Board's Dioxin Reassessment Subcommittee to review U.S. EPA's Dioxin Reassessment Documents.
- Janet Macher was appointed to the National Research Council's Committee on Air Quality in Passenger Cabins of Commercial Aircraft (Nov 20, 2000-Sept 25, 2001)
- Jed Waldman was appointed to U.S. EPA Science Advisory Board's Integrated Human Exposure Committee, starting October 2000 (two-year term).

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California Department of Health Service / Occupational Health Branch

-- Jim Cone (Jcone@ohb.org), and Liz Katz (Ekatz@dhs.ca.gov) http://www.ohb.gov

Fluorescent Lighting and Computer Vision Syndrome. The Cal/OSHA Standards Board is responding to petitions for rulemaking concerning workplace fluorescent lighting and computer vision syndrome. HESIS researched the published literature to assist the Board.

Integrated Occupational Health and Safety and Pollution Prevention (P_2) Programs Project. HESIS is planning collaborative work with the Department of Toxic Substances Control and the Institute for Research and Technical Assistance. The joint work will simultaneously address means to reduce industrial air pollutant generation and occupational health exposures.

School IAQ Cases

- HESIS responded to a parent reporting sick teachers and students in a private preschool. The caller was concerned about molds, pathogens, asbestos, and construction activities in the school. HESIS provided referrals and information for medical treatment, occupational regulations, school health resources, and local health and safety agencies.
- HESIS assisted a public school teacher who reported headaches and allergic symptoms among 4 teachers. The symptoms were associated with construction activities to install Internet wiring, and were temporally related to workplace occupancy. After reviewing the symptoms and environmental conditions with the caller, we provided informational materials and referrals to medical treatment and the appropriate Cal/OSHA office.
- Another inquiry regarding schools was received from a teacher's spouse. HESIS provided referrals and information on indoor environmental problems including roofs leaks, lack of heat, construction ongoing in classrooms, and fire safety.

Other Occupational Health Items

- HESIS assisted a Cal/OSHA compliance officer in locating chemical hazard information for illegal methamphetamine manufacturing laboratories. The resources located included a CDC report and a Washington State Department of Health guideline document.
- In response to a reported "cluster" of 8 cancers among workers in a California bank headquarters, HESIS provided a letter outlining the general principles of evaluation of this type of report. In this case, there was no occupational etiology noted, nor had there been a sufficient latency period for occupants to develop cancers from this facility.
- HESIS responded to a call from a genetics counselor regarding a Cantonese-speaking pregnant patient who was exposed to solvents at work. HESIS reviewed the chemical list provided by the employer, and spoke to the patient by phone with the assistance of a Cantonese-speaking industrial hygienist in the Occupational Health Branch. The patient described symptoms and working conditions consistent with solvent-induced neurotoxicity. On this basis, HESIS faxed the health care provider a letter outlining the reasons for recommending medical removal.
- HESIS assisted a health educator from the Labor Occupational Health Program by providing technical information on the relative safety and toxicity of various solvents. The caller is developing a book chapter for garment manufacturing workers worldwide who are exposed to fabric spotting solvents.

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California Department of Industrial Relations (Cal/OSHA)

- Bob Nakamura (bnakamura@hq.dir.ca.gov) http://www.dir.ca.gov/dosh/

Airborne Contaminants (§8CCR 5155). Changes to Section 5155 were adopted by the Cal/OSHA Standards Board on November 16th. The changes include revised PELs and the addition of new substances.

Laboratory Fume Hoods (§8CCR 5154.1). The Division has convened four advisory committee

meetings to evaluate two different petitions requesting the Standards Board to reduce ventilation rate requirements and establish a performance standard in place of the existing regulation. The last meeting was on October 3, 2000 in San Francisco. A draft proposal was presented and discussed by the attendees. The next meeting is scheduled for January 23. The Division coordinator is Bruce Wallace who can be reached at 415-703-5165.

Heat Stress Standard. The Division has held two advisory committee meetings to review the need and issues involved in proposing a standard for heat stress. The last meeting was on October 24, 2000 in Oakland. A draft proposal was reviewed at the meeting. For more information, contact Bob Barish at 415-703-5100.

Other issues. If members would like a discussion of any Cal/OSHA issue pertaining to indoor air quality issues at the next meeting, please contact Bob Nakamura at 415-703-5160 or by e-mail (above).

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Lawrence Berkeley National Laboratory / Indoor Environments Program

-- Mike Apte (MGApte@lbl.gov) http://eetd.lbl.gov/iep/iep.html

The IED is involved in a wide array of ongoing research projects relating to IAQ. Program information is available at the web site.

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Office of Environmental Health Hazard Assessment / Indoor Air Risk Assessment Group -- Richard Lam (*RLam@oehha.ca.gov*) http://www.oehha.org/

SB 25 - Children's Environmental Health Protection. OEHHA and ARB are required by this bill to determine whether, based on public health, scientific literature, and exposure pattern data, the current standards protect the health of the public, including infants and children, with adequate margin of safety. The OEHHA/ARB joint report entitled " Adequacy of California's Air Quality Standards, Senate Bill 25 - Children's Environmental Health Protection" (download from http://www.oehha.ca.gov/air/toxic_contaminants/AQAC1.html) includes discussion on seven criteria air pollutants - carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, particulate matter and sulfates, lead, and hydrogen sulfide. In addition, OEHHA is required to evaluate available health information on 90 Toxic Air Contaminants (TACs) and develop a prioritized list based on which ones are most important in terms of differential health effects on children. Emission data will be considered in the picking of these chemicals.

OEHHA Symposiums.

- *Environmental Protection Indicators for California*, January 18-19, 2001 in Sacramento, CA. As part of the implementation of Cal/EPA's Strategic Vision, OEHHA will be collaboratively developing environmental indicators. The indicator system will provide a means of assessing environmental trends associated with Cal/EPA's mission. It likely will include

measures relating to Cal/EPA-wide goals which encompass such areas as: air quality; water quality; human health and ecological risks from hazardous substances; reduction of the disproportionate impacts of pollution on communities; and efficient use of natural resources.

- *2nd Children's Environmental Health Symposium*, April 23-24, 2001 at the Doubletree Inn in Monterey. The symposium will focus on two topics. The first day will be devoted to pharmacokinetics including differences between children and adults. Speakers will talk not only about modeling and child-specific parameters but also provide examples of toxicokinetics of compounds in adults versus children. The second day is devoted to neurotox issues and in particular to neurobehavioral testing. Speakers will discuss the latest in animal neurobehavioral testing, and studies where neurobehavioral testing was used to examine effects of environmental toxicants in children. The interactive session in the afternoon will examine examples of chemicals for which neurobehavioral evaluations have been done in animals, humans, or both and discuss the utility of such testing in risk assessment. Contact person: Mark Miller at www.mmiller@oehha.ca.gov

Indoor Reference Exposure Levels (IRELs). OEHHA has developed IRELs for benzene, chloroform, formaldehyde, methyl chloroform, methyl ethyl ketone, methylene chloride, nitrogen dioxide, perchloroethylene, styrene, and toluene. The IRELs (1, 8 or 24-hour) were derived from OEHHA's Hot Spots Acute REL document. These draft IRELs are presently undergoing internal and external review.

Green Building Taskforce and Technical Group. OEHHA continues to work with Secretary Adams staff and other stakeholders on a document to fulfill the requirements of the Governor's Executive Order D-16-00 on Sustainable Building Practices.

ARB/DHS Portable Classroom Study. OEHHA provides technical support to ARB and DHS on this study (see ARB & DHS write-up).

Traffic Study. The "East Bay Children's Respiratory Health Questionnaire" was pilot tested among staff who have school attending children. See previous CIWG-IAQ minutes for more details. Contact person: Janice Kim at www.jkim@oehha.ca.gov.

Rulemaking Meetings. The following are rulemaking meetings that OEHHA either are involved or have interest as they may impact our programs.

- *South Coast Air Quality Management District's (AQMD) Proposed Rule 1425*. Proposed Rule 1425 will seek to reduce to reduce toxic emissions and risk from film cleaning and printing operations by requiring a 90 percent reduction of uncontrolled perchloroethylene emissions. In these operations, perc, an indoor air pollutant, may be present in high concentrations. The purpose of PR 1425 is to reduce perc emissions with emission controls and use of alterative solvents. PR 1425 includes requirements of the federal National Emission Standard for Hazardous Air Pollutants (NESHAP) applicable to film cleaning operations using halogenated solvents (40 CFR Part 63, August 19, 1999).
- *ARB's Adoption of Regulations* These regulations are of interest as these activities may release

contaminants into indoor environments. Check these regulation activities in ARB's website: www.arb.ca.gov/regact/regup00.htm.

- *Adoption of proposed amendments to the regulation for reducing VOC emissions from antiperspirants and deodorants.*
- *Adoption of proposed amendments to the asbestos airborne toxic control measure - asbestos-containing serpentine*
- *Adoption of proposed amendments to the California consumer products regulation relating to aerosol adhesive*
- *Adoption of proposed airborne toxic control measure for emission of chlorinated toxic air contaminants from automotive maintenance and repair activities.*

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Sacramento County Commission on Human Rights & Fair Housing

-- Betty Gwiazdon (dir_programsrvs@cwo.com)

The Commission continues to be involved in many mold housing complaints. We are very concerned about the medical effects of mold after continued exposure. At present we are working on language to amend the Health and Safety Code to include mold as a sub-standard condition under certain circumstances.

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U.S. EPA Region IX / Indoor Environment Team http://www.epa.gov/iaq/

-- Barbara Spark (spark.barbara@epamail.epa.gov)

Asthma. EPA's Children's Health program is cooperating with DHS-EHIB (Rick Kreutzer) and OEHHA (Michael Lipsett) to contribute funding toward California's participation in the International Study of Asthma and Allergies in Childhood (ISSAC, Phase III). The school-based study will be undertaken by the American Lung Association of the East Bay. It will be based on a survey of children in two age groups, 6-7 and 13-14. The study will use protocols developed by ISSAC and will piloted in Alameda County. Data collection is scheduled to take place during 2001 and 2002 (Contact: Jean Circiello, U.S. EPA, Region 9 Children's Health Coordinator, (415) 744-1631,

Barbara Spark has joined the recently constituted Advisory Committee of RAMP – *Regional Asthma Management and Prevention Initiative* (Alameda, Contra Costa, San Francisco and Solano Counties). Their web site is http://www.rampasthma.org.

Mold. Barbara Spark was the opening speaker at a half-day session on mold litigation at a Nov. 30-Dec. 1 "Construction Defects," conference attended by about 250 people, presented in Los Angeles by Mealey publications. She provided an overview of the rise of the moisture/mold issue in public awareness during the 1990's, and the challenge to public health officials in the face of evolving science. Interest in the mold subject was so great that Mealeys extended the mold litigation topic to the full 1 ½ days for their next presentation (in Philadelphia in February).

IAQ Training. As these minutes are being written, "IAQ: Asthma and Allergen Control," January 22-23, 2001 in Oakland has had to close out registration at 130 people, amongst whom there is a sizeable number of public sector people who've never previously attended any of our IAQ training events. Alternate underwriting is still being sought for a similar course presentation in Southern California.

IAQ/Schools. Workshops on IAQ Tools for Schools will be provided by EPA grantees the American Lung Association of San Francisco and San Mateo Counties (Feb. 21) and ALA of Orange County (Feb. 23). These workshops are intended for schools and school districts ready for actual program implementation; however, invitations will also be extended to districts at a more exploratory stage. Instructors are Dr. Richard Shaughnessy, Shelly Rosenblum, and Barbara Spark. The Feb. 21 workshop will cover the entire Bay Area and will dovetail with the ALA/AIHA school Mentor program (Contact: Beth Saiki, ALA of SF/SM, (650) 990-5864. The Orange County (2/23) ALA contact is Lizzie Gelle (714) 995-5864. For information on IAQ Tools for Schools training in other areas, contact Shelly Rosenblum (415) 744-1047.

A variety of EPA programs are lending technical support to the Los Angeles USD. As part of this effort, Shelly Rosenblum and Barbara Spark have become liaisons with an IAQ working group headed by LAUSD Environmental Health and Safety Director Angelo Bellomo. The American Lung Association of L.A. County is playing an important role.

Revised *IAQ Tools for Schools* Action Kit. While new kits aren't yet back from the printer, the "upgrade" of the IAQ Tools for Schools Action Kit has now been completed, and is available at the Indoor Environments Division web page. It's also available on CD-ROM. See http://www.epa.gov/iaq

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WORKING GROUP COMMITTEES

Indoor Environmental Quality of Schools

-- Jed Waldman (JWaldman@dhs.ca.gov)

Healthy School Legislature, 2000. The Healthy Schools bill (AB 2260) introduced by Assemblyman Shelly was passed by the legislature and signed by Governor Davis. The new law addresses pesticide use; best management practices for healthy schools was dropped from the final version. The bill would require that the preferred method of managing pests at school sites be effective least toxic pest management practices and would further require that the state take the necessary steps, pursuant to specified provisions, to facilitate the adoption of effective least management practices at school sites. The bill would require each school site to maintain records of all pesticide use at the school site for a period of 4 years and make the records available to the public upon request, thus imposing a state-mandated local program. The bill would require that licensed and certified pest control operators include information on any school pesticide application

that they perform as part of their otherwise applicable pesticide use reporting requirements. The bill would require, on an annual basis, the school district designee to provide to all staff and parents or guardians of pupils enrolled at a school written notification addressing, among other things, expected pesticide use, thus imposing a state-mandated local program. The bill would require that the recipients be afforded the opportunity to register with the school district to receive information regarding individual pesticide applications. The bill would require the school district designee to post warning signs prior to application of pesticides at a schoolsite, thus imposing a state-mandated local program. The bill would require the Department of Pesticide Regulation to promote and facilitate the voluntary adoption of integrated pest management programs as specified, maintain an internet website, and establish an integrated pest management training program. The chaptered bill can be found on-line at: http://www.leginfo.ca.gov/pub/99-00/bill/asm/ab_2251-2300/ab_2260_bill_20000927_chaptered.html .

Collaborative for High Performance Schools. A set of workshops is scheduled for January 17th and 18th in Sacramento. One workshop will be directed toward district officials (17th), and the other will be a technical presentation for architects and engineers (18th). The CHPS manual is now finalized and available at their web site: http://www.chps.net/.

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Building Design and Operations

-- Leon Alevantis (*LAlevant*@dhs.ca.gov)

Environmental Specifications for Office Workstations. Bids were received and were evaluated by members of the Green Team. Due to confidentiality requirements no furhter information can be shared at this time. It is anticipated that a successful bidder will be selected in the near future and contract should be signed soon thereafter. A number of time-consuming legal requirements must be met before a contract is signed.

Capitol Area East End Project. Meetings with DGS and the two contractors continue, and various issues are addressed and resolved as necessary.

Green Building TaskForce. HDR's recommendations for a selected number of stated projects are anticipated in December. DGS has provided the Green Building Taskforce with a number of comments on the LEED 4 CA. A response is being drafted to address these concerns. We are in the process of retaining Hal Levin and Anthony Bernheim through existing contracts Eley Associates has with CEC to expand the language of the Environmental Specification originally developed for Block 225 of the Capitol Area East End Project. The revised text will make the Specification more user-friendly and will be applicable to any type of contruction. We anticipate having the revised language of the Specification available early 2001. Also, we are trying to establish methodologies for life cycle costing that will be acceptable to DOF. Alternative ways of establishing non-traditional benefits, such as increased productivity and societal implications, need to be established

Sustainability Executive Order. The Green Building Taskforce continues to meet on drafting the report to the Governor as required by EO D-16. The report to the Governor is due to be submitted by the end of February 2001.

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FUTURE MEETINGS

Upcoming meetings of the CIWG-IAQ are scheduled as follows:

- March 7, 2001, CalEPA Building, 10th & I St., Sacramento
- June 6, 2001, DHS Laboratory, 2151 Berkeley Way, Berkeley
- September 12, 2001, TBA
- December 5, 2001, TBA

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